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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/743,959	12/22/2003	Robert S. Beach	IBM1P044A/SJ09-2000-0124U	9362
28875	7590	05/27/2005		
Zilka-Kotab, PC P.O. BOX 721120 SAN JOSE, CA 95172-1120			EXAMINER KIM, PAUL D	
			ART UNIT 3729	PAPER NUMBER
DATE MAILED: 05/27/2005				

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/743,959

Applicant(s)

BEACH, ROBERT S.

Examiner

Paul D Kim

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 April 2005.
 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
 4a) Of the above claim(s) 9-16 is/are withdrawn from consideration.
 5) ☒ Claim(s) 4-6 is/are allowed.
 6) ☒ Claim(s) 1-3, 7 and 8 is/are rejected.
 7) ☐ Claim(s) _____ is/are objected to.
 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☐ All b) ☐ Some * c) ☐ None of:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

This office action is a response to the amendment filed on 4/11/2005.

Claim Rejections - 35 USC § 112

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claims 1, 2, 7 and 8 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter, which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Re. Claim 1: The phrase "adjusting a magnitude of said external magnetic field to cause the magnetization of said ferromagnetic layer in said bias tabs to be substantially perpendicular to the direction of said external magnetic field" as recited in lines 11-13 was not originally described in the specification.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the

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applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 1-3, 7 and 8 are, as best understood in view of the rejections under 112 first paragraphs, rejected under 35 U.S.C. 102(e) as being anticipated by Lin et al. (US PAT. 6,175,475).

Lin et al. teach a process of manufacturing a spin valve sensor comprising steps of: placing the sensor (400) in an external magnetic field as shown in Fig. 4; adjusting a magnitude of the external magnetic field to cause the magnetization of a ferromagnetic layer (410) in a bias tabs (415, 420, 430) to be substantially perpendicular (422) to the direction of the magnetic field (see also col. 5, lines 37-66); heating the sensor above a blocking temperature of both of the antiferromagnetic layers; and, cooling the sensor below the blocking temperature of both of the antiferromagnetic layers in the presence of said magnetic field (see also col. 5, line 1 to col. 6, line 24).

As per claim 2 the heating and cooling are performed in a single sequence (equivalent with heating and then cooling the antiferromagnetic layers).

As per claim 3 a direction of the magnetic field during the single sequence of heating and cooling is not oriented in a direction parallel (such as perpendicular) to the ABS (see also col. 6, lines 5-7 and 14-16).

As per claim 7 a second antiferromagnetic layer (432) and the free layer (410) have substantially the same width as shown in Fig. 4.

As per claim 8 the first (430) and second (432) antiferromagnetic layers have substantially the same composition (NiO).

Allowable Subject Matter

5. Claims 4-6 are allowed.

Response to Arguments

6. Applicant's arguments with respect to claims 1-8 have been considered but are moot in view of the new ground(s) of rejection.
7. Applicant argues that the prior art of record fails to disclose the claimed invention such that the external magnetic field is adjusted to cause the magnetization of the ferromagnetic layer to perpendicular to the external magnetic field. Examiner traverses the argument that there are no such limitations described in the specification. Also, Lin et al. teach that the external magnetic field is caused the rotation the direction of the magnetization of the free layer relative to the direction of magnetization of the pinned (ferromagnetic) layer, which is pinned perpendicular to the ABS:

Conclusion

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Paul D Kim whose telephone number is 571-272-4565. The examiner can normally be reached on Monday-Friday between 8:00 AM to 4:00 PM.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Peter Vo can be reached on 571-272-4690. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Paul D Kim
Examiner
Art Unit 3729